SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 5C (H-3): sc-365667

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies exhibit 30-60% homology with Ras p21. Accumulating data suggests an important role for Rab proteins, either in endocytosis or in biosynthetic protein transport. The transport of newly synthesized proteins from the endoplasmic reticulum to various stacks of the Golgi complex and to secretory vesicles involves at each stage the movement of carrier vesicles, a process that appears to involve Rab protein function. The possibility that Rab proteins might also direct the exocytosis from secretory vesicles to the plasma membrane is supported by the observation that in yeast, the SEC4 protein, which is 40% homologous to Rab proteins, is associated with secretory vesicles. At least eight members of the Rab subfamily have been identified, each of which is found at a particular stage of a membrane transport pathway.

REFERENCES

1. Zahraoui, A., et al. 1989. The human Rab genes encode a family of GTP-binding proteins related to yeast YPT1 and SEC4 products involved in secretion. J. Biol. Chem. 264: 12394-12401.
2. Chavrier, P., et al. 1992. The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. Gene 112: 261-264.
3. Baldini, G., et al. 1992. Cloning of a Rab3 isotype predominately expressed in adipocytes. Proc. Natl. Acad. Sci. USA 89: 5049-5052.
4. Takizawa, P., et al. 1993. Coatomers and SNAREs in promoting membrane traffic. Cell 75: 593-596.

CHROMOSOMAL LOCATION

Genetic locus: RAB5C (human) mapping to 17q21.2; Rab5c (mouse) mapping to 11 D.

SOURCE

Rab 5C (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 182-205 near the C-terminus of Rab 5C of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 5C (H-3) is available conjugated to agarose (sc-365667 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365667 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365667 PE), fluorescein (sc-365667 FITC), Alexa Fluor® 488 (sc-365667 AF488), Alexa Fluor® 546 (sc-365667 AF546), Alexa Fluor® 594 (sc-365667 AF594) or Alexa Fluor® 647 (sc-365667 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365667 AF680) or Alexa Fluor® 790 (sc-365667 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365667 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

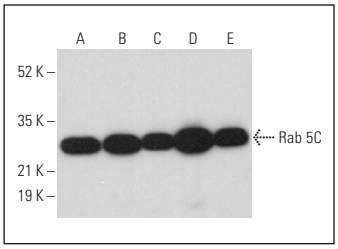
Rab 5C (H-3) is recommended for detection of Rab 5C of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rab 5C siRNA (h): sc-37157, Rab 5C siRNA (m): sc-37158, Rab 5C shRNA Plasmid (h): sc-37157-SH, Rab 5C shRNA Plasmid (m): sc-37158-SH, Rab 5C shRNA (h) Lentiviral Particles: sc-37157-V and Rab 5C shRNA (m) Lentiviral Particles: sc-37158-V.

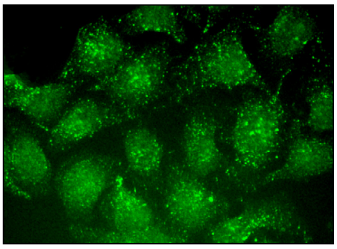
Molecular Weight of Rab 5C: 24 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, K-562 whole cell lysate: sc-2203 or A549 cell lysate: sc-2413.

DATA



Rab 5C (H-3): sc-365667. Western blot analysis of Rab 5C expression in HL-60 (**A**), A549 (**B**), K-562 (**C**), SK-BR-3 (**D**) and SP2/0 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Rab 5C (H-3): sc-365667. Immunofluorescence staining of formalin-fixed HeLa cells showing endosome localization.

SELECT PRODUCT CITATIONS

1. Boutchueng-Djidjou, M., et al. 2018. A type 2 diabetes disease module with a high collective influence for Cdk2 and PTPLAD1 is localized in endosomes. PLoS ONE 13: e0205180.
2. Barbera, S., et al. 2019. The small GTPase Rab5c is a key regulator of trafficking of the CD93/Multimerin-2/β1 Integrin complex in endothelial cell adhesion and migration. Cell Commun. Signal. 17: 55.
3. Martínez-Greene, J.A., et al. 2021. Quantitative proteomic analysis of extracellular vesicle subgroups isolated by an optimized method combining polymer-based precipitation and size exclusion chromatography. J. Extracell. Vesicles 10: e12087.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.